Product Overview

NTB082N65S3F: Power MOSFET, N-Channel, SUPERFET® III, FRFET®, 650 V, 40 A, 82 mΩ , D2PAK

For complete documentation, see the data sheet.

SUPERFET III MOSFET is ON Semiconductor's brand-new high voltage super-junction (SJ) MOSFET family that is utilizing charge balance technology for outstanding low on-resistance and lower gate charge performance. This advanced technology is tailored to minimize conduction loss, provide superior switching performance, and withstand extreme dv/dt rate.
Consequently, SUPERFET III MOSFET is very suitable for the various power systems for miniaturization and higher efficiency.
SUPERFET III FRFET MOSFET's optimized reverse recovery performance of body diode can remove additional component and improve system reliability.

Features

- 700 V @ TJ = 150 oC
- Ultra Low Gate Charge (Typ. Qg = 81 nC)
- Low Effective Output Capacitance (Typ. Coss(eff.) = 722 pF)
- Optimized Capacitance
- Excellent body diode performance (low Qrr, robust body diode)
- Typ. RDS(on) = 70 mΩ
- 100% Avalanche Tested
- RoHS Compliant

Benefits

- Higher system reliability at low temperature operation
- Lower switching loss
- Lower switching loss
- Lower peak Vds and lower Vgs oscillation
- Higher system reliability in LLC and Phase shift full bridge circuit

Applications

- Telecommunication
- Cloud system
- Industrial

End Products

- Telecom power
- Server power
- Solar / UPS
- EV charger

Part Electrical Specifications

Product	Pricing ($/Unit)	Compliance	Status	Channel Polarity	Configuration	$V_{(BR)DSS}$ Min (V)	V_{GS} Max (V)	$V_{GS(th)}$ Max (V)	I_D Max (A)	P_D Max (W)	$R_{DS(on)}$ Max @ V_{GS} = 2.5 V (mΩ)	$R_{DS(on)}$ Max @ V_{GS} = 4.5 V (mΩ)	$R_{DS(on)}$ Max @ V_{GS} = 10 V (mΩ)	Q_g Typ @ V_{GS} = 4.5 V (nC)	Q_g Typ @ V_{GS} = 10 V (nC)	C_{iss} Typ (pF)	Package Type
NTB082N65S3F	2.547	Pb-free Halide free non AEC-Q and PPAP	Active	N-Channel	Single	650	30	5	40	313	-	-	82	-	81	3410	D2PAK-3 / TO-263-2

For more information please contact your local sales support at www.onsemi.com.

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